



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,766	02/27/2004	Kroum S. Stoev	K35R1851	8458
35219 7590 02/06/2007 WESTERN DIGITAL TECHNOLOGIES, INC.. ATTN: SANDRA GENUA 20511 LAKE FOREST DR. E-118G LAKE FOREST, CA 92630			EXAMINER WATKO, JULIE ANNE	
			ART UNIT 2627	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/788,766

Applicant(s)

STOEV ET AL.

Examiner

Julie Anne Watko

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36-39 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,10-15,17,18,23,25,26,28 and 35 is/are rejected.
- 7) ☒ Claim(s) 3,8,9,16,19-22,24,27 and 29-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/27/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 4-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki '954 (US Pat No. 6583954 B1).

See statement of rejection in the office action mailed September 7, 2006.

As recited in claim 1, in addition to the above teachings, Sasaki '954 shows that the gap is nonferromagnetic (see col. 9, lines 17-20, "recording gap layer 10 made of an insulating film such as an alumina film").

Regarding the dimensions recited in claims 12-13: See teachings, rationale and motivation stated in the office action mailed September 7, 2006.

3. Claims 1-2, 5, 10, 15, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki '543 (US Pat. No. 6459543 B1).

See statement of rejection in the office action mailed September 7, 2006.

As recited in claim 1, in addition to the above teachings, Sasaki '543 shows that the gap is nonferromagnetic ("alumina", see col. 13, line 38).

4. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harris, III et al (US PAP No. 20030179497 A1).

See statement of rejection in the office action mailed September 7, 2006.

Art Unit: 2627

Regarding the dimensional limitations added to claim 14 in the amendment filed December 27, 2006: See teachings, rationale and motivation stated in the office action mailed September 7, 2006.

As recited in claim 17, Harris, III et al show that the conductive section is part of a coil 68 that substantially encircles (see Fig. 6) the backgap region.

5. Claims 25-26, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDonald et al (US PAP No. 20050180048 A1).

See statement of rejection in the office action mailed September 7, 2006.

Allowable Subject Matter

6. Claims 3, 8-9, 16, 19-22, 24, 27 and 29-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 36-39 are allowed.

Response to Arguments

8. Applicant's arguments filed December 27, 2006, have been fully considered but they are not persuasive.

Applicant has claimed heads with the same structure as the prior art heads, only smaller.

The law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

Art Unit: 2627

It has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

In the disk drive art, a major long term goal is increasing data density. Increased data density is achieved by making heads with smaller and smaller dimensions over time. Thus, the motivation to make head dimensions smaller and smaller is notoriously well known in the art.

On page 15, 2nd full paragraph, Applicant argues that “the recited pedestal of claim 1 has a specific thickness of less than four hundred and fifty nanometers in the region between the gap and the second pole. As a result, more precise tailoring of the track width during trimming of the pedestal and throat layers may be achieved.” The Examiner has considered this argument thoroughly and asserts that Applicant has failed to prove that this result of the small dimension is an unexpected result.

On page 16, 1st full paragraph, Applicant argues that “the mere possibility that a soft magnetic pedestal might be designed with the recited limitations is insufficient. There must be some teaching or suggestion in Sasaki I or the related art of the claimed element or to make an appropriate modification to Sasaki I.” The Examiner has considered this argument thoroughly and asserts that Sasaki ‘954 and related art are not the only permissible sources for motivation.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the long term trend of increasing data density in the disk drive art leads to a desire for smaller and smaller heads over time. This knowledge, generally available to a person of ordinary skill in the disk drive art, provides motivation for making a known head smaller.

On page 16, 1st full paragraph, Applicant argues that “Sasaki I specifically describes a range of thicknesses that is at least a factor of two times the largest recited thickness of the soft magnetic pedestal. As such, Applicant respectfully submits that Sasaki teaches away from the recited range”. The Examiner has considered this argument thoroughly and asserts that the nature of the teaching of Sasaki ‘954 is highly relevant. It is noted by the Examiner that Sasaki ‘954 does not criticize, discredit, or otherwise discourage the use of smaller heads; thus, Sasaki ‘954 does not teach away from the use of smaller heads. See In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). Furthermore, a prior art reference which discloses a preference for a dimensional range falls far short of the kind of teaching that would discourage one of ordinary skill in the art from fabricating a device outside of the preferred dimensional range. See In re Geisler, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

Applicant presents similar arguments regarding the rejection in view of Sasaki ‘543. The similar arguments are similarly non-persuasive.

Applicant presents similar arguments regarding the rejection in view of Harris, III et al. The similar arguments are similarly non-persuasive.

On page 19, last two lines, Applicant argues that “Applicant can find no indication in Harris that the specified ranges are desirable or even possible.” The Examiner has considered this argument thoroughly and asserts that if Applicant believes the claimed range to be impossible to achieve, Applicant should unambiguously admit such impossibility on the record. Applicant is advised that, should such admission be made on the record, such admission would be used against Applicant in a rejection for lack of enablement.

Applicant presents similar arguments regarding the rejection in view of MacDonald et al. The similar arguments are similarly non-persuasive.

9. On page 21, last paragraph, Applicant “respectfully submits that a conclusion that MacDonald renders claim 25 obvious based solely on the sizes of the poles in FIG. 11 of MacDonald involves improper hindsight.” The Examiner has considered this argument thoroughly and asserts that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the long term trend toward higher data density and smaller heads is knowledge generally available to a person of ordinary skill in the art, and is not gleaned only from Applicant's disclosure.

Applicant's arguments are thus non-persuasive, and the rejections are maintained.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Honda et al (IEEE Transactions on Magnetics, v. 33, no. 5, pages 3097-3099) teach that "actually achieved density in the previous work, however, was restricted by the gap length and the track width of the head used. The extended study has been carried out using MIG heads with smaller gap lengths and narrower track widths" (see Introduction).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 2627

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597.

The examiner can normally be reached on Monday-Friday, 10AM to 5PM and all day Saturday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko, J.D.
Primary Examiner
Art Unit 2627

February 2, 2007
JAW

A handwritten signature in black ink, appearing to be 'JAW', with a large, stylized flourish extending from the end.